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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,329	10/07/2005	Hans Bernhoff	2816-12	7119

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THE MAXHAM FIRM
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EXAMINER	
GONZALEZ, JULIO C	

ART UNIT	PAPER NUMBER
2834	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/09/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/552,329	BERNHOFF ET AL.	
	Examiner	Art Unit	
	Julio C. Gonzalez	2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *15-37* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *15-30 and 34-37* is/are rejected.

7)☒ Claim(s) *31-33* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *07 October 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 34 is objected to because of the following informalities: it is not clear what is meant by the rotor comprising a "permanent magnetic". Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 15, 34 – 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neuenschwander (US 4,539,485) in view of Smalser et al (US 6,617,705).

Neuenschwander discloses a wave power device for producing electricity (see abstract) having a hull 50, a rotor having magnets 42 and stator having windings 34 and the device being able to be anchored to a sea/lake bottom (see figure 3).

However, Neuenschwander does not disclose using an electromagnetic damping device.

On the other hand, Smalser et al discloses for the purpose of protecting wave power generation systems against damages that it is desirable to control the up and down motion of the power stroke during high level of input energy (column 3, line 44 – 57; column 4, lines 22 – 24) and that an electromagnetic damper can be used (column 3, lines 30 – 34; column 2, lines 42 – 45). Smalser et al teachings would have enable to affect the forces exerted by the stator on the rotor by damping the oscillation of the power strokes.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design a wave power device as disclosed by Neuenschwander and to modify the invention by using an electromagnetic damping device for the purpose of protecting wave power generation systems against damages as disclosed by Smalser et al.

4. Claims 16, 17, 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neuenschwander and Smalser et al as applied to claim 15 above, and further in view of Willyoung (5,654,602).

The combined power assembly discloses all of the elements above. However, the combined power assembly does not disclose that the stator winding is configured as a fractional slot winding.

On the other hand, Willyoung discloses for the purpose of improving the winding patterns of three phase generators that fractional slot windings are known in the art (column 4, lines 20 - 30, 40;see figure 1).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the combined power assembly device as disclosed above and to use fractional slow winding for the stator for the purpose of improving the winding patterns of three phase generators as disclosed by Willyoung.

5. Claims 23 – 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neuenschwander, Smalser et al and Willyoung as applied to claims 15, 16, 22 above, and further in view of Korenaga (US 6,791,214).

The combined power assembly discloses all of the elements above. However, the combined power assembly does not disclose that magnets are oriented obliquely in relation to a plane perpendicular to the direction of motion.

On the other hand, Korenaga discloses for the purpose of reducing efficiently cogging force, an electromagnetic machine having stator 102 having windings 103 and a rotor 110 having magnets 111 being obliquely with respect to the direction of motion (see figures 1A, 3, 5).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the combined power assembly device as disclosed above and to modify the invention by having the magnets being obliquely with respect to the direction of motion for the purpose of reducing efficiently cogging force as disclosed by Korenaga.

6. Claims 18 – 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neuenschwander, Smalser et al and Willyoung as applied to claims 16, 17 above, and further in view of Ordinary Skill in the Art.

The Prior Art discloses the claimed invention except for optimum value given to the fractional slot winding. It would have been obvious to one having ordinary skill in the art at the time the invention was made to such values, since it has been held that discovering the optimum value of result effective variable involves only routine skill in the art. *In re Boesch,* 617 F. 2d 272, 205 USPQ 215 (CCPA 1980).

Moreover, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to come with those optimum ranges (less than 1; greater than 1) that the applicant discloses, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In *re Aller*, 105 USPQ 233.

Allowable Subject Matter

7. Claims 31 – 33 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julio C. Gonzalez whose telephone number is 571-272-2024. The examiner can normally be reached on M-F (8AM-5PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on 571-272-2044.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Julio C. Gonzalez
Primary Examiner
Art Unit 2834

Jcg

February 6, 2007